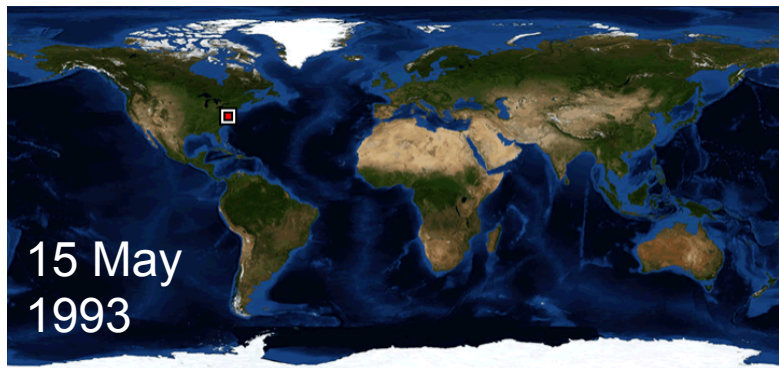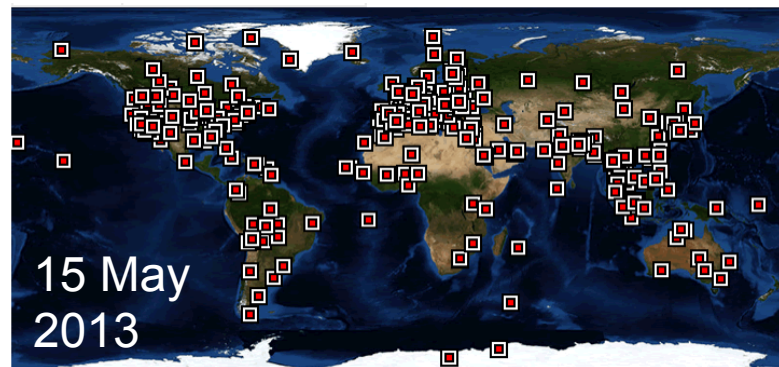# AERONET Aerosol Robotic Network
Twenty years of observations and research
Brent Holben, Code 618, NASA GSFC

15 May 1993

Figure 1: The first AERONET site GSFC as of May 15, 1993

15 May 2013

Figure 2: AERONET sites as of May 15, 2013

Figure 3: AERONET site in Shirahama, Japan exemplifies international collaboration (Kinki University) with over 400 partners in the federated network.

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Abstract:

AERONET celebrated 20 years of continuous automatic measurements on 15 May 2013. The AERONET program is a federation of ground-based remote sensing aerosol networks established by NASA and LOA-PHOTONS (CNRS) and has been expanded with collaborators from international agencies, institutes, universities, individual scientists and partners. Through collaboration and NASA resources, AERONET now supports over 500 instruments and approximately 400 sites in more than 80 countries and territories. AERONET pioneered NASA's open data policy resulting in over 3000 community published articles and more than 7000 citations in peer reviewed journal articles on all phases of aerosol research relating to remote sensing.

References:
Please see http://aeronet.gsfc.nasa.gov for further information and data access.

Data Sources:
AERONET data are long time series point observations nominally taken at 15 minute intervals throughout the day from the UV to Near-IR. AERONET researchers lead the field in developing and implementing peer reviewed algorithms for computing quality assured aerosol optical depth, single scattering albedo and particle size distribution among others.

Technical Description of Image:

Figure 1: This is a global map, from May 15, 1993, showing the beginning of the AERONET program at Goddard Space Flight Center.

Figure 2: The 20th anniversary global map showing over 400 AERONET sites in more than 80 countries.

Figure 3: The AERONET automated sun and sky scanning radiometer is identical for all sites in the network and is the first step in four elements imposing standardization across the network: Instrumentation, calibration, processing and data delivery. Thus, data can be compared between sites and through time.

Scientific significance:
AERONET provides a long-term, continuous public domain database of aerosol optical, microphysical, and radiative properties for aerosol research and characterization, satellite and model validation, and synergism with other databases.

Relevance for future science and relationship to Decadal Survey:
AERONET's dedicated staff continues research while providing the highest quality science data. This includes long term decadal studies as well as short term field campaigns. The release of further improved (V3) data products is planned for late 2013 that will benefit the land, ocean and atmosphere research communities.